

JC17 Rec'd PCT/PTO 08 JUN 2005

DIALOG(R)File 351:Derwent WPI  
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010735067 \*\*Image available\*\*

WPI Acc No: 1996-232022/199624

XRPX Acc No: N96-194681

Link for chain conveyor - includes upper transportation plane and  
transverse housings for receiving pivot pins to be hinged with other  
similar links so as to make chain conveyor

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Number of Countries: 007 Number of Patents: 004

Basic Patent:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 711714	A1	19960515	EP 95203005	A	19951107	199624 B

Priority Applications (No Type Date): IT 94MI2255 A 19941108

Cited Patents: EP 480863; EP 493349; GB 1256590; US 5335768

Designated States (Regional): DE; DK; ES; FR; GB; IT; NL

Abstract (Basic): EP 711714 A

The link (11) comprises an upper transportation plane (13) and transverse housings (14) to receive pivot pins (15) for hinging with other similar links so as to form a chain conveyor. The link further comprises below the transportation plane (13), at least one surface (16) resting and sliding on the guide and teeth (19) projecting towards each other in a direction transverse to the link so as to define a passageway (22) between them for receiving at least part of the guide. The teeth (19) are designed to be fitted under corresponding projections (21) of the part of the guide so as to form a slidable engagement along the guide itself. The teeth (19) are located close to the side ends of the link so as to comprise the support and slide surface between them.

It also comprises seating (23) disposed in the side walls of the passageway (22) and into which sliding elements (24) are received which embody side sliding surfaces (25) of the link along the guide.

ADVANTAGE - Links can be easily and cheaply manufactured and assembled. Ensures high steadiness qualities above all on curves. Enables disassembling without complete slipping off.

Dwg.1/3

Title Terms: LINK; CHAIN; CONVEYOR; UPPER; TRANSPORT; PLANE; TRANSVERSE;  
HOUSING; RECEIVE; PIVOT; PIN; HINGE; SIMILAR; LINK; SO; CHAIN; CONVEYOR  
Derwent Class: Q35

International Patent Class (Main): B65G-000/00; B65G-017/08

International Patent Class (Additional): B65G-021/16

File Segment: EngPI

DIALOG(R)File 348:EUROPEAN PATENTS

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00756773

Improved chain conveyor having improved steadiness and slide features  
 Kettenforderer mit verbesserten Festigkeits- und Gleiteigenschaften  
 Convoyeur a chaine avec stabilite et guidage ameliores

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PATENT (CC, No, Kind, Date): EP 711714 A1 960515 (Basic)  
 EP 711714 B1 990317

APPLICATION (CC, No, Date): EP 95203005 951107;

PRIORITY (CC, No, Date): IT 94MI2255 941108

DESIGNATED STATES: DE; DK; ES; FR; GB; IT; NL

INTERNATIONAL PATENT CLASS: B65G-017/08; B65G-021/16;

## ABSTRACT EP 711714 A1

A link (11) comprises an upper transportation plane (13) and transverse housings (14) for receiving pivot pins (15) to be hinged with other similar links so as to make a chain conveyor. The link further comprises, below the transportation plane (13), at least one surface (16) resting and sliding on a guide (12) and teeth (19) projecting towards each other in a direction transverse to the link to define a passageway (22) therebetween for receiving at least part of the guide. The teeth (19) are designed to be fitted under corresponding projections (21) in the guide so as to form a slidable engagement along said guide. Said teeth (19) are located close to the side ends of the link in order to include the support and slide surface (17) of the guide. The link comprises seatings (23) into which sliding elements (24) embodying side sliding surfaces (25) of the link along the guide are received. Elements (24) comprise end plugging portions (26) to close the housing (14) ends to prevent the pins from slipping off therefrom. (see image in original document)

ABSTRACT WORD COUNT: 207

## LEGAL STATUS (Type, Pub Date, Kind, Text):

Lapse: 020626 B1 Date of lapse of European Patent in a contracting state (Country, date): ES 19990317,  
 Oppn None: 20000308 B1 No opposition filed: 19991218  
 Lapse: 031105 B1 Date of lapse of European Patent in a contracting state (Country, date): DK 19990617, ES 19990317,  
 Application: 960515 A1 Published application (A1with Search Report ;A2without Search Report)  
 Examination: 970108 A1 Date of filing of request for examination: 961114  
 Examination: 980617 A1 Date of despatch of first examination report: 980505  
 Grant: 990317 B1 Granted patent

LANGUAGE (Publication,Procedural,Application): English; English; English

## FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9911	871
CLAIMS B	(German)	9911	811
CLAIMS B	(French)	9911	958
SPEC B	(English)	9911	2046
Total word count - document A			0
Total word count - document B			4686
Total word count - documents A + B			4686

**SPECIFICATION** The present invention relates to a chain conveyor installation and, in particular, to an innovatory accomplishment of links for a chain conveyor and to the related travel guide.

In the known art conveyors are well known which comprise a plurality of interconnected links to define an articulated transportation plane running along appropriate guides.

Each link comprises a transversely-extended plate the upper portion of which embodies the transportation plane and from the lower part of which a central portion or articulation body projects. The guide has a corresponding U-shaped section to define a central channel within which the articulation bodies pivoted on each other run, whereas the upper link plates rest and slide on the upper ends of the U arms.

The central body in the links usually has pairs of oppositely-directed teeth to be fitted under corresponding ribs present in the guide and projecting inwardly of the channel. In this manner the links are forced to slide along the guide but cannot move away from said guide due to the engagement between the teeth and the ribs. Said engagement is above all necessary on the curved portions of the conveyor. In fact, in such portions the chain traction gives rise to tilting forces tending to incline the transportation plane formed by the links inwardly of the curve.

In spite of the presence of the teeth, the links do not remain on a flat level due to the play between the teeth and the guide. In currently used links, these plays cannot be reduced both because fitting problems are to be avoided and because unavoidable allowances are present, due to molding of the links made of plastic material, thermoplastic resins for example. Even a relatively small vertical play between the teeth and the guide channel is widened by the arm formed by the sliding side projections of the transportation plane of the link.

Therefore on a bend the transportation plane is not steady and undergoes strong oscillations that can impair the steadiness of the carried products. In addition, in the case of transportation planes formed of several chain conveyors disposed side by side, unavoidable differences in height are formed between the transportation planes, which brings about jamming of the carried products.

The link wear at the points of maximum friction consisting of the reaction areas between the teeth and the channel further increases plays, thereby worsening the conveyor steadiness in time. On the other hand, for economical reasons, the links cannot be made of materials having particularly high mechanical features as regards high resistance to wear and high smoothness.

In most traditional conveyors having teeth directed outwardly of the link, so as to form an inverted T for fitting into a mating channel in the guide, there is also the further disadvantage that the links can be disassembled from the guide only by making them slip off along the sliding direction of the conveyor. Thus replacement even of a single broken or worn out link for example, involves slipping off of all the conveyor links.

It is a general object of the present invention to obviate the above

mentioned drawbacks by providing chain conveyors the links of which can be easily and cheaply manufactured and assembled while at the same time ensuring high steadiness qualities above all on curves, enable disassembling without a complete slipping off being necessary, and also have improved qualities in terms of smoothness and resistance to wear.

In view of the above object, in accordance with the invention, a link for a chain conveyor running along a guide has been devised which comprises an upper transportation plane and transverse housings to receive pivot pins for hinging with other similar links so as to form a chain conveyor, the link further comprising, below the transportation plane, at least one surface resting and sliding on the guide and teeth projecting towards each other in a direction transverse to the link so as to define a passageway therebetween for receiving at least part of the guide, the teeth being designed to be fitted under corresponding projections of said at least part of the guide so as to form a slidable engagement along the guide itself, characterized in that the teeth are located close to the side ends of the link so as to comprise said support and slide surface between them.

According to the invention, a guide segment for a chain conveyor formed of a plurality of links articulated with each other to define an upper transportation plane has been also devised, the guide segment comprising, at the upper part thereof, at least one slide and support surface for the links moving along it and at least one laterally-directed projection designed to be interfitted with teeth projecting from the lower part of the links to slidably engage said teeth with the segment, characterized in that the projection laterally juts out of a body portion of the guide segment defining the slide surface at the top, said body portion being designed to be received in a link passageway between the projecting teeth.

Still in accordance with the invention, a chain conveyor installation has been devised which comprises a guide defining, at the upper part thereof, at least one support and slide surface for a plurality of links which are hinged with each other to define an upper transportation plane, the links being provided, below the transportation plane, with at least one surface resting and sliding on the guide and teeth projecting towards each other in a direction transverse to the link to define a passageway therebetween for receiving at least part of the guide, the teeth being designed to be fitted under a corresponding projection of the guide at least along stretches of the installation path of travel, so as to constitute a slidable engagement along the guide, characterized in that the teeth are located close to side ends of the links so as to comprise said support and slide surface between them.

For better explaining the innovatory principles of the present invention and the advantages it offers over the known art, a possible embodiment applying said principles is described hereinafter by way of non-limiting example, with the aid of the accompanying drawings, in which:

- Fig. 1 is a view, taken in a plane transverse to the carrying direction, of a link according to the invention and sliding on a respective guide;
- Fig. 1 is a partial top plan view, partly in section, of conveyor links according to the invention;
- Fig. 3 is a bottom plan view of a link as shown in Fig. 2;
- Fig. 4 is a side view of the links, partly sectioned along line IV-IV in Fig. 2.

Referring to the drawings, a transportation installation 10 according to the invention comprises a plurality of links 11 hinged with each other to form a chain conveyor.

As clearly shown in Fig. 2 too, each link is comprised of an upper transportation plane 13 and transverse housings 14 to receive pivot pins

15 for hinging with similar links. Each link further comprises, below the transportation plane, at least one surface 16 for resting and sliding on a corresponding upper support surface 17 of the guide 12.

Obviously, by "resting surface" it is herein also intended a plurality of discontinuous resting elements defining a generic resting and sliding plane, such as ribs 18 for example, as shown in Fig. 3.

The link 11, close to its side ends, comprises blocks 20 projecting downwardly to define a passageway 22 between them for receiving at least part of the guide so that the support and slide surface 17 is comprised within said passageway.

Projecting from blocks 20 are corresponding teeth 19 facing each other and directed towards each other in a direction transverse to the link. Over at least some stretches thereof the guide, on its body portion received in the passageway 22 and defining the slide surface 17 by its upper side, comprises one side projection 21 under which the teeth will fit so as to form a slidable engagement along the guide.

Advantageously the guide segment comprising the projection is a segment of a curve and the projection is disposed on the external side of the bending, so that it engages the tooth 19 located on this side. In this manner the tilting torque generated by the conveyor traction on curves is counteracted.

Since the coupling area between the guide and the link is close to the side end of the link, there is a weak play between the link tooth and the guide projection so that only very little vertical movements of the link are allowed. As a result the transportation plane does not tilt to a great degree when running on a bend.

As clearly viewed from Fig. 1, by making the transverse size of the guide portion received in passageway 22 (inclusive of the side projection 19) smaller than the distance between the facing ends of the teeth 19, disengagement between teeth and projections is possible by mere lateral displacement between links and guide. Thus the conveyor can be lifted from the guide for servicing without being it necessary to separate the links from each other.

As shown in Fig. 2, for an easy manufacture of the link by moulding, the teeth 19 are disposed below the transportation plane 13 at a position facing breaks in said transportation surface. As a result, the teeth are made without producing undercuts, moulding of which is difficult and complicated.

Said breaks correspond to advantage to spaces 29 opened in the pin housings and designed to receive conformed articulation portions belonging to other links, as it clearly appears from Fig. 2 showing two hinged links 11.

Advantageously, seatings 23 are present in the side walls of passageway 22, that is the inner surfaces of blocks 20; said seatings 23 receive elements or inserts 24 slightly projecting into the passageway 22, so as to form side sliding surfaces 25 of the links on the guide. It has been noticed in fact that the greatest cause for friction and wear in chain conveyors is represented by the high specific pressures generated at lateral slide contact points while the conveyors are travelling on curves.

Elements 24 can be made of a material having high smoothness and/or wear resistance qualities, so that the conveyor performance is greatly improved.

In addition, inserts 24 can be secured to the link in a removable manner, by appropriate snap fitting for example, so that they can be easily replaced when worn.

As clearly shown in Figs. 2 and 3, the sliding elements 24 can be provided to advantage with plugging portions 26 capable of closing the housings 14 for introducing the pins between the links, so that slipping off of the pins from said housings 14 is prevented. Thus inserts 24

perform a dual function, as they offer sliding surfaces and locking means for the pivot pins.

As viewed from Fig. 3, for an easy and safe positioning of the inserts, seatings 23 are open downwardly of the link for introduction of the sliding elements in a direction transverse to the pin extension, said seatings transversely intersecting the pin housings 14. In this manner, the locking force of the insert in the seating has not to counteract possible axial sliding forces of the respective pin. Thus the fitting system between the insert and the seating can be of low force and therefore can be easily managed for assembling and disassembling. For example, as shown in Fig. 1, the sliding elements 24 can have teeth 27 for locking in the seatings 23, into which teeth an edge 28 formed by the intersection between the seating and the respective pin housing 14 is snap fitted.

For easy introduction of the insert, each tooth 27 can taper in the fitting direction.

At this point it is apparent that the intended purposes have been achieved, since there is provided a transportation installation having links of high steadiness and smoothness and capable of being easily assembled and disassembled. With the links of the invention it is for example possible to make conveyors consisting of several side-by-side lanes without the occurrence of differences in height between the transportation planes. In addition, the possibility of a free side sliding between the links of side-by-side lanes is allowed.

Obviously, the above description applying the innovatory principles of the invention is given for purposes of illustration only and therefore must not be considered as a limitation of the scope of the invention as herein claimed.

For example, the exact shape and proportion of the different elements will depend on the particular practical requirements.

In addition, fitting projections may be provided on both sides of the guide.

- CLAIMS 1. A link (11) for a chain conveyor running along a guide (12) comprising an upper transportation plane (13) and transverse housings (14) to receive pivot pins (15) for hinging with other similar links so as to form a chain conveyor, the link further comprising, below the transportation plane (13), at least one surface (16) resting and sliding on the guide and teeth (19) projecting towards each other in a direction transverse to the link so as to define a passageway (22) therebetween for receiving at least part of the guide, the teeth (19) being designed to be fitted under corresponding projections (21) of said at least part of the guide so as to form a slidable engagement along the guide itself, characterized in that the teeth (19) are located close to the side ends of the link so as to comprise said support and slide surface between them.
2. A link according to claim 1, characterized in that it comprises seatings (23) disposed in the side walls of the passageway (22) and into which sliding elements (24) are received which embody side sliding surfaces (25) of the link along the guide.
  3. A link according to claim 2, characterized in that the sliding elements (24) are comprised of plugging portions (26) for closing the ends of the pin-receiving housings (14), so as to prevent the pins from slipping off the housings.
  4. A link according to claim 2, characterized in that the seatings (23) are open at the lower part of the link for introduction of the sliding elements (24) thereinto, in a direction transverse to the pin (15) extension.
  5. A link according to claim 4, characterized in that the seatings (23)

intersect the pin housings (14) in a transverse direction.

6. A link according to claim 5, characterized in that the sliding elements (24) have clamping teeth (27) for locking into the seatings (23), into which teeth an edge (28) formed by the intersection between the seating (23) and the respective pin housing (14) is snap fitted.
7. A link according to claim 1, characterized in that the teeth (19) are disposed below the transportation plane (13) at a position facing breaks (29) in said transportation surface.
8. A link according to claim 7, characterized in that the breaks (29) correspond to spaces opened in the pin housings and designed to receive hinging portions belonging to other links.
9. A guide segment (12) for a chain conveyor formed of a plurality of links (10) articulated with each other to define an upper transportation plane (11), the guide segment comprising, at the upper part thereof, at least one slide and support surface (17) for the links moving along it and at least one laterally-directed projection (21) designed to be interfitted with teeth (19) projecting from the lower part of the links to slidably engage said teeth with the segment, characterized in that the projection (21) laterally juts out of a body portion of the guide segment defining the slide surface (17) at its top, said body portion being designed to be received in a link passageway (22) between the projecting teeth (19).
10. A guide segment according to claim 9, characterized in that it has a curved extension, said side projection (21) being disposed on the external side of the curve.
11. A chain conveyor installation comprising a guide (12) defining, at the upper part thereof, at least one support and slide surface (17) for a plurality of links (11) which are hinged with each other to define an upper transportation plane (13), the links being provided, below the transportation plane (13), with at least one surface (16) resting and sliding on the guide and teeth (19) projecting towards each other in a direction transverse to the link to define a passageway (22) therebetween for receiving at least part of the guide, the teeth being designed to be fitted under a corresponding projection (21) of the guide at least along stretches of the installation path of travel, so as to constitute a slidable engagement along the guide, characterized in that the teeth (19) are located close to side ends of the links so as to comprise said support and slide surface (17) between them.
12. An installation according to claim 11, characterized in that the links are formed with seatings (23) in the side walls of the passageway (22), which seatings receive elements (24) that form side sliding surfaces of the links on the guide, at least in said stretches of the installation path of travel.
13. An installation according to claim 12, characterized in that the links are hinged with each other by means of pins (15), the sliding elements (24) embodying plugging portions (26) for closing the pin-receiving housings (14), so as to prevent the pins (15) from slipping off their housings.
14. An installation according to claim 11, characterized in that the transverse size of the guide portion received in the passageway (22), inclusive of at least one side projection (21), is smaller than the distance between the faced ends of the teeth (19), so that disengagement between the teeth and the projection is allowed by side displacement between the links and the guide.
15. An installation according to claim 11, characterized in that said stretches of the installation path of travel have a curved extension, said side projection (21) being disposed on the external side of the bending.

- CLAIMS 1. Kettenglied (11) für einen Kettenforderer, das an einer Führung (12) entlangläuft und eine obere Transportebene (13) sowie Queraufnahmen (14) zur Aufnahme von Schwenkbolzen (15) zur gelenkigen Verbindung mit weiteren entsprechenden Kettengliedern aufweist, um auf diese Weise den Kettenforderer zu bilden, wobei das Kettenglied unter der Transportebene (13) weiterhin zumindest eine Fläche (16), die auf der Führung aufliegt und gleitet sowie Zähne (19) aufweist, die in einer Richtung quer zum Kettenglied einander zugewandt herausragen und auf diese Weise zwischen sich einen Laufgang (22) zur Aufnahme zumindest eines Teiles der Führung begrenzen, wobei die Zähne (19) derart konstruiert sind, das sie unter entsprechenden Vorsprungen (21) zumindest eines Teiles der Führung eingepast werden können und somit einen Gleiteingriff entlang der Führung selbst bilden, dadurch gekennzeichnet, das die Zähne (19) dicht an den Seitenenden des Kettengliedes angeordnet sind und somit die Auflage- und Gleitfläche zwischen sich aufnehmen.
2. Kettenglied nach Anspruch 1, dadurch gekennzeichnet, das es in den Seitenwänden des Laufganges (22) angeordnete Pasflächen (23) aufweist, in welchen Gleitelemente (24) aufgenommen werden, welche die seitlichen Gleitflächen (25) des Kettengliedes an der Führung entlang bilden.
3. Kettenglied nach Anspruch 2, dadurch gekennzeichnet, das die Gleitelemente (24) von Pfropfenbereichen (26) zum Verschliesen der Enden der Bolzenaufnahmen (14) umschlossen sind, so das die Bolzen daran gehindert werden, aus den Aufnahmen herauszugleiten.
4. Kettenglied nach Anspruch 2, dadurch gekennzeichnet, das die Pasflächen (23) im unteren Teil des Kettengliedes zur Einführung der Gleitelemente (24) in einer Richtung quer zur Verlängerung des Bolzens (15) offen sind.
5. Kettenglied nach Anspruch 4, dadurch gekennzeichnet, das die Pasflächen (23) die Bolzenaufnahmen (14) durchdringen.
6. Kettenglied nach Anspruch 5, dadurch gekennzeichnet, das die Gleitelemente (24) Klemmzähne (27) zum Einrasten in die Pasflächen (23) aufweisen, in welche die Zähne mit einer durch die Durchdringung zwischen der Pasfläche (23) und der jeweiligen Bolzenaufnahme (14) gebildeten Kante (28) einrasten.
7. Kettenglied nach Anspruch 1, dadurch gekennzeichnet, das die Zähne (19) unterhalb der Transportebene (13) in Positionen angeordnet sind, die Durchbrüche (29) in der Transportebene zugewandt sind.
8. Kettenglied nach Anspruch 7, dadurch gekennzeichnet, das die Durchbrüche (29) den offenen Bereichen in den Bolzenaufnahmen entsprechen und derart konstruiert sind, das sie den Gelenkteil des anderen Kettengliedes aufnehmen.
9. Führungssegment (12) für einen Kettenforderer aus einer Vielzahl gelenkig untereinander verbundener Kettenglieder (11) zur Definition der oberen Transportebene (13), wobei das Führungssegment an seinem oberen Teil zumindest eine Gleit- und Auflagefläche (17) für die dort entlang bewegten Kettenglieder sowie zumindest einen seitlich gerichteten Vorsprung (21) aufweist, der zum pasfähigen Eingriff mit den Zähnen (19) aus dem unteren Teil der Kettenglieder herausragt, um mit einem Segment gleitend an den Zähnen anzuliegen, dadurch gekennzeichnet, daß der Vorsprung (21) seitlich aus dem Grundkörper des Führungssegmentes herausragt und an seiner Oberseite die Gleitfläche (17) begrenzt, wobei der Grundkörper derart ausgebildet ist, das er in dem Kettenglied-Laufgang (22) zwischen den vorspringenden Zähnen (19) aufgenommen wird.
10. Führungssegment nach Anspruch 9, dadurch gekennzeichnet, das es einen gekrümmten Aussenbereich hat und der Vorsprung (21) an der Aussen Seite der Krümmung angeordnet ist.



11. Kettenforderer-Anordnung mit einer Führung (12), die in ihrem oberen Teil zumindest eine Auflage- und Gleitfläche (17) für eine Vielzahl von Kettengliedern (11) definiert, die untereinander gelenkig verbunden sind, um eine obere Transportebene (13) zu definieren, wobei die Kettenglieder unter der Transportebene (13) zumindest eine Fläche (16), die auf der Führung aufliegt und gleitet sowie Zähne (19) aufweist, die in einer Richtung quer zum Kettenglied einander zugewandt herausragen und auf diese Weise zwischen sich einen Laufgang (22) zur Aufnahme zumindest eines Teiles der Führung begrenzen, wobei die Zähne derart konstruiert sind, dass sie unter einem entsprechenden Vorsprung (21) der Führung zumindest entlang der Verlängerung der Bahn der Anordnung eingepast werden können und somit einen Gleiteingriff entlang der Führung selbst bilden, dadurch gekennzeichnet, dass die Zähne (19) dicht an den Seitenenden der Kettenglieder angeordnet sind und somit die Auflage- und Gleitfläche (17) zwischen sich aufnehmen.
12. Anordnung nach Anspruch 11, dadurch gekennzeichnet, dass die Kettenglieder mit in den Seitenwänden des Laufganges (22) angeordneten Pasflächen (23) versehen sind, in welchen Elemente (24) aufgenommen werden, welche zumindest in der Verlängerung der Bahn der Anordnung die Gleitflächen des Kettengliedes auf der Führung bilden.
13. Anordnung nach Anspruch 12, dadurch gekennzeichnet, dass die Kettenglieder mittels Bolzen (15) gelenkig miteinander verbunden sind, wobei Gleitelemente (24) Pfropfbereiche (26) zum Verschließen der Bolzenaufnahmen (14) aufweisen, so dass die Bolzen (15) daran gehindert werden, aus ihren Aufnahmen herauszugleiten.
14. Anordnung nach Anspruch 11, dadurch gekennzeichnet, dass die Querabmessung des in dem Laufgang (22) aufgenommenen Führungsteiles einschließlich zumindest eines seitlichen Vorsprungs (21) kleiner ist als der Abstand zwischen den abgeschrägten Enden der Zähne (19), so dass durch eine seitliche Verschiebung zwischen den Kettengliedern und der Führung die Vorsprünge und die Zähne außer Eingriff gebracht werden können.
15. Anordnung nach Anspruch 11, dadurch gekennzeichnet, dass die Verlängerungen des Bahn der Anordnung einen gekrümmten Außenbereich haben, wobei die seitlichen Vorsprünge (21) an der Außenseite der Krümmung angeordnet sind.

- CLAIMS 1. Maillon (11) destiné à un transporteur à chaîne circulant le long d'une glissière (12), comprenant un plan supérieur de transport (13) et des logements transversaux (14) destinés à recevoir des axes de pivotement (15) afin de l'articuler avec d'autres maillons semblables de manière à former un transporteur à chaîne, ledit maillon comprenant en outre, au-dessous du plan de transport (13), au moins une surface (16) reposant et glissant sur la glissière, et des dents (19) s'étendant l'une vers l'autre suivant une direction transversale au maillon de manière à définir un passage (22) entre celles-ci destiné à recevoir au moins une partie de la glissière, les dents (19) étant conçues pour s'ajuster sous des saillies correspondantes (21) de ladite au moins une partie de la glissière, de manière à former un engagement pouvant coulisser le long de la glissière elle-même, caractérise en ce que les dents (19) sont disposées près des extrémités latérales du maillon de manière à comprendre ladite surface de support et de glissement entre elles.
2. Maillon selon la revendication 1, caractérise en ce qu'il comprend des logements (23) agencés dans les parois latérales du passage (22) et dans lesquels sont recrus des éléments de glissement (24) qui composent les surfaces de glissement latérales (25) du maillon le long de la glissière.
  3. Maillon selon la revendication 2, caractérise en ce que les éléments

- de glissement (24) comprennent des parties d'obturation (26) destinees a obturer les extremités des logements de reception d'axe (14), de maniere a empecher les axes de glisser hors des logements.
4. Maillon selon la revendication 2, caracterise en ce que les logements (23) sont ouverts au niveau de la partie inferieure du maillon en vue de l'introduction des elements de glissement (24) dans ceux-ci, suivant une direction transversale a l'etendue de l'axe (15).
  5. Maillon selon la revendication 4, caracterise en ce que les logements (23) recoupent les logements d'axe (14) suivant une direction transversale.
  6. Maillon selon la revendication 5, caracterise en ce que les elements de glissement (24) comportent des dents de serrage (27) afin de les verrouiller dans les logements (23), dents sur lesquelles une arete (28) formee par l'intersection entre le logement (23) et le logement d'axe respectif (14) vient s'encliqueter.
  7. Maillon selon la revendication 1, caracterise en ce que les dents (19) sont disposees au-dessous du plan de transport (13) en un emplacement en regard d'interruptions (29) de ladite surface de transport.
  8. Maillon selon la revendication 7, caracterise en ce que les interruptions (29) correspondent a des espaces ouverts dans les logements d'axe, et concus pour recevoir des parties d'articulation appartenant a d'autres maillons.
  9. Segment de glissiere (12) destine a un transporteur a chaine forme d'une pluralite de maillons (11) articules l'un avec l'autre afin de definir un plan superieur de transport (13), le segment de glissiere comprenant, a la partie superieure de celui-ci, au moins une surface de glissement et de support (17) destinee aux maillons se deplacant le long de celui-ci, et au moins une saillie orientee lateralement (21) concue pour s'interengager avec des dents (19) faisant saillie depuis la partie inferieure des maillons, de maniere a engager lesdites dents avec le segment avec possibilite de glissement, caracterise en ce que la saillie (21) depasse lateralement d'une partie de corps du segment de glissiere qui definit la surface de glissement (17) a son sommet, ladite partie de corps etant concue pour etre recue dans un passage du maillon (22) entre les dents saillantes (19).
  10. Segment de glissiere selon la revendication 9, caracterise en ce qu'il presente une etendue incurvee, ladite saillie laterale (21) etant disposee sur la face externe de la courbe.
  11. Installation de transporteur a chaine comprenant une glissiere (12) definissant, a la partie superieure de celle-ci, au moins une surface de support et de glissement (17) destinee a une pluralite de maillons (11) qui sont articules l'un avec l'autre afin de definir un plan superieur de transport (13), les maillons etant munis, audessous du plan de transport (13), d'au moins une surface (16) reposant et glissant sur la glissiere, et de dents (19) faisant saillie l'une vers l'autre suivant une direction transversale au maillon, afin de definir un passage (22) entre elles destine a recevoir au moins une partie de la glissiere, lesdites dents etant concues pour s'ajuster sous une saillie correspondante (21) de la glissiere au moins le long de troncons du trajet de deplacement de l'installation, de maniere a constituer un engagement pouvant coulisser le long de la glissiere, caracterisee en ce que les dents (19) sont placees pres des extremités laterales des maillons de maniere a comprendre ladite surface de support et de glissement (17) entre elles.
  12. Installation selon la revendication 11, caracterisee en ce que les maillons sont formes avec des logements (23) dans les parois laterales du passage (22), lesquels logements recoivent des elements (24) qui forment des surfaces laterales de glissement des maillons sur la glissiere, au moins dans lesdits troncons du trajet de

deplacement de l'installation.

13. Installation selon la revendication 12, caracterisee en ce que les maillons sont articules l'un avec l'autre au moyen d'axes (15), les elements de glissement (24) comprenant des parties d'obturation (26) destinees a obturer les logements de reception d'axe (14), de maniere a empecher les axes (15) de glisser hors de leurs logements.
14. Installation selon la revendication 11, caracterisee en ce que la dimension transversale de la partie de la glissiere recue dans le passage (22), y compris au moins une saillie laterale (21), est inferieure a la distance entre les extremités en regard des dents (19), de sorte qu'une desolidarisation entre les dents et la saillie est permise par un deplacement lateral entre les maillons et la glissiere.
15. Installation selon la revendication 11, caracterisee en ce que lesdits troncons du trajet de deplacement de l'installation presentent une etendue incurvee, ladite saillie laterale (21) etant disposee sur la face externe de la courbure.